



UNITED STATES PATENT AND TRADEMARK OFFICE

5

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,569	03/15/2004	Hideo Yoshizawa	KON-1859	9832
20311	7590	06/14/2007	EXAMINER	
LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			DOTE, JANIS L	
		ART UNIT	PAPER NUMBER	
		1756		
		MAIL DATE	DELIVERY MODE	
		06/14/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/800,569	YOSHIZAWA ET AL.	
	Examiner	Art Unit	
	Janis L. Dote	1756	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 16 April 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1,3,5-11 and 13-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1,3,5-11 and 13-19 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date _____.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

Art Unit: 1756

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on Apr. 16, 2007, has been entered.

2. The examiner acknowledges the amendments to claims 18 and 19 filed on Apr. 16, 2007. Claims 1, 3, 5-11, and 13-19 are pending.

3. The rejections of claims 18 and 19 under 35 U.S.C. 112, second paragraph, set forth in the office action mailed on Dec. 20, 2006, paragraph 5, have been withdrawn in response to the amendments to claims 18 and 19 filed on Apr. 16, 2007.

4. The examiner has determined that the instant specification defines the following terms:

(1) The term "average circular degree" (also referred to as the average value of shape coefficient) of the toner is defined

Art Unit: 1756

at page 16, line 12, to page 17, line 5, of the specification, as the average value of the equation:

"shape coefficient = (circumference length of the circle calculated from the circle equivalent diameter of the toner particle)/(circumference length of the projection image of the particle)."

(2) The term "surface roughness Ra" recited in instant claim 1 was determined by following the definition, "center line roughness Ra defined in JIS B601 was extended to three dimension so that it can be applicable to a measured plane and is 'a value averaging absolute values of a deviation from a standard plane to a specified plane,'" expressed by the equation disclosed at page 14, line 14, to page 15, line 4, of the instant specification.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. The reference US 2003/0180646 A1 (Asano) was published on Sep. 25, 2003, prior to the filing date Mar. 15, 2004, of the instant application. Accordingly, Asano qualifies as prior art under 35 U.S.C. 102(a), as well as under 35 U.S.C. 102(e).

Art Unit: 1756

7. Claims 1, 5-9, 13-15, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano combined with US 2002/0076636 A1 (Uchida).

Asano teaches an image forming method that meets the steps recited in the instant claims but for using the particular toner recited in the instant claims. The Asano method comprises the steps of: (1) developing a latent image on a photoreceptor with a developer comprising a toner; (2) transferring the toner image to a recording medium; (3) fixing the toner image to the recording medium; and (4) removing the toner remaining on the photoreceptor with a cleaning device. Asano further teaches a full color image forming method comprising the steps of: (1) forming four electrostatic latent images on four photoreceptors, which correspond to a yellow image, a magenta image, a cyan image, and a black image, respectively; (2) developing the four latent images, respectively, with a yellow toner, a magenta toner, a cyan toner, and a black toner; (3) transferring the yellow toner image, the magenta toner image, the cyan toner image, and the black toner image from the four photoreceptors to a receiving member; (4) fixing the toner images to the receiving member; and (5) cleaning the toner remaining on each of the four photoreceptors with a cleaning device. Fig. 1; and paragraphs 0048-0051, 0061, and 0371. The

Art Unit: 1756

photoreceptor comprises a conductive substrate and a surface layer that comprises "hydrophobicity" treated silica particles having a number average particle size of 45 nm. The surface layer has a surface roughness of 35.6 nm, i.e., 0.0356 μm . See Preparation of Photoreceptor 22 in paragraph 0356 and in Table 6 at page 25, example 8. (Note that the photoreceptor nos. listed in Table 6 should have the numeral "2" before the stated number, e.g., "2" in example 8 should be - 22 -.) The Asano surface roughness Ra has the same definition as the surface roughness Ra recited in instant claim 4. See Asano, paragraphs 0116-0120 and paragraph 4 supra. The photoreceptor surface layer meets the surface layer limitations recited in instant claims 1 and 19.

The cleaning device comprises an elastic rubber cleaning blade 66A and a brush 66C. Fig. 5, and paragraphs 0070 and 0077. The cleaning blade 66A contacts the photoreceptor in a direction counter to the rotating direction of the photoreceptor, as recited in instant claim 7. Paragraph 0072. The brush 66C comprises fibers having a thickness of 5 to 20 deniers. Paragraph 0084. The upper limit of the Asano fiber thickness range, 20 deniers, is within the thickness range 6 to 30 deniers recited in instant claim 9. The Asano fiber thickness range also overlaps the range recited in instant claim 9. The cleaning blade meets the cleaning blade

Art Unit: 1756

limitations recited in instant claims 6-8. The brush meets the brush limitations recited in instant claim 8 and 9.

As discussed supra, Asano does not disclose the use of the particular toner recited in the instant claims. However, Asano does not limit the type of toner used. Asano, paragraph 0010 and reference claim 1.

Uchida discloses a black toner comprising a colorant, a binder resin, and the ester wax no. 21, pentaerythrytol tetrabehenate. The toner has an average circularity of 0.964 with a standard deviation of circularity of 0.031. Ester compound No. 21 at page 3; Latex 1 in Table 1 at page 11; color particles group 1 in Table 2 at page 12 and Table 5 at page 13. The ester wax no. 21 meets the wax limitations recited in instant claims 1 and 15. The Uchida average circularity and standard deviation of circularity fall within the ranges of average circular degree and standard deviation of circular degree recited in instant claims 1 and 13 and in claim 14, respectively. The Uchida average circularity and standard deviation of circularity have the same definitions as the average circular degree and standard deviation of the circular degree recited in the instant claims. Uchida, paragraphs 0112-0113 and paragraph 4 supra. Uchida further discloses a yellow toner, a magenta toner, and a cyan toner that

Art Unit: 1756

meet the toner limitations recited in instant claims 1 and 13-15. According to Uchida, its toner has excellent high fixing characteristics without the occurrence of offset. The toner is said to: provide high quality images after long storage; provide stable images for many repeated uses; and minimize the problem of photoreceptor filming and "deformation of image blurring." Paragraph 0005 and Tables 7 and 8, example 1.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Uchida, to use the Uchida toners in the image forming methods disclosed by Asano. That person would have had a reasonable expectation of successfully obtaining image forming methods that provide stable high quality single toner images or stable high quality full color images as taught by Uchida.

8. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asano combined with Uchida, as applied to claim 8 above, further in view of additional teachings in Asano.

The claim is rejected for the reasons discussed in the office action mailed on Dec. 20, 2006, paragraph 9, which are incorporated herein by reference.

Art Unit: 1756

9. Claims 3, 16, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano combined with Uchida, as applied to claim 1 above, further combined with US 6,338,929 B1 (Hagi).

The claims are rejected for the reasons discussed in the office action mailed on Dec. 20, 2006, paragraph 10, which are incorporated herein by reference.

10. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Asano combined with Uchida, as applied to claim 8 above, further combined with Japanese Patent 09-274417 (JP'417). See the USPTO English-language translation of JP'417 for cites.

The claim is rejected for the reasons discussed in the office action mailed on Dec. 20, 2006, paragraph 11, which are incorporated herein by reference.

11. Applicants' arguments filed on Apr. 16, 2007 as applied to the rejections over Asano in paragraphs 7-10 above have been fully considered but they are not persuasive.

Applicants assert that the Asano reference is not prior art because the Rule 131 declaration, which was executed on Mar. 12, 2007, and filed on Apr. 16, 2007, shows that the inventors were in possession of the claimed invention before 102(e) date of

Art Unit: 1756

Asano, Feb. 28, 2003.

However, the declaration filed on Apr. 16, 2007, under 37 CFR 1.131 has been considered but is ineffective to overcome the Asano reference for the following reasons:

Applicants' attempt to satisfy 37 CFR 1.131 by relying on the inventors' declaration that their Japanese patent application P2002-371944 reports an actual reduction to practice fails for lack of compliance with 37 CFR 1.131(b).

37 CFR 1.131(b) states that "[t]he showing of facts shall be such, in character and weight, as to establish reduction to practice prior to the effective date of the reference . . .

Original exhibits of drawings or records, or photocopies thereof, must accompany and form part of the affidavit or declaration or their absence must be satisfactorily explained" (emphasis added).

The declaration examples and tests described in the certified English-language translation of the Japanese unexamined patent publication 2004-205618 A (JP' 618) filed on Jan. 10, 2006 (which the inventors state is "identical in substance" with their Japanese patent application P2002-371944, see paragraph 6 of the declaration), are not the original exhibits of drawings or records, or photocopies thereof. At best, they are merely a "report" of the work the inventors

Art Unit: 1756

attest was actually performed by them or under their direct supervision and control at least as early as Dec. 24, 2002. There is, however, no objective credible evidence in the present record to show that the examples and tests were actually reduced to practice prior to the effective filing date of the Asano reference as required under 37 CFR 1.131. The inventors' statement that after a diligent search, the original documentation is not currently available is not a satisfactory explanation. The filing practices in Japan are irrelevant to the current situation.

Thus, on the present record, the examiner cannot make a reasonable determination whether the instantly claimed invention was actually reduced to practice prior to the effective date of Asano reference. The examiner cannot make a reasonable determination whether actual examples were made under the same conditions as reported in the translation, or whether actual test results were obtained as reported in the translation. The examples and tests described in the translation do not meet the "documentary evidence" required under 37 CFR 1.131(b) to establish a reduction to practice of the invention. Accordingly, the certified English-language translation of JP' 618 does not meet the requirements of 37 CFR 1.131(b) to show

Art Unit: 1756

that the inventors actually reduced the invention to practice prior to Feb. 28, 2003.

Applicants' comments regarding the discussion of disclosure statements in MPEP 715.07 and Mulder are not persuasive. First, MPEP 715.07 states that "Disclosure statements (MPEP 1706) may be used as documentary evidence of conception" (emphasis added), not evidence of actual reduction to practice. (Moreover, according to MPEP 1706, the "disclosure statements" are invention disclosure statements filed with the USPTO, not some filing elsewhere under different patent laws.) Second, Mulder supports the examiner, not applicants. In Mulder, the applicants were accorded the benefit of their foreign filing date as a "constructive" reduction to practice because the requirements of 35 USC 119 had been satisfied. That is not the case here. Applicants have filed no claim under 35 U.S.C. 119 for the benefit of foreign priority to their Japanese patent application.

At most, applicants might be able to rely on their Japanese patent application as evidence of conception in the same way that an applicant in a US application could rely on the filing date of an abandoned US patent application as evidence of conception - but not as evidence of "constructive" reduction to

Art Unit: 1756

practice. See In re Costello, 219 USPQ 389, 392 (Fed. Cir. 1983).

37 CFR 1.131 permits applicants to antedate a reference under 35 U.S.C. 102(a) or 102(e) by showing prior conception of the invention coupled with due diligence from the effective filing date of the reference to the filing date of the US application. Here, however, applicants have made no attempt to account for the approximately thirteen months lapse between the Feb. 28, 2003, effective filing date of the Asano reference and the Mar. 15, 2004, filing date of their US application. Thus, the examiner need not and does not consider whether applicants' Japanese patent application satisfies the requirement of conception.

Accordingly, the Rule 131 declaration filed on Apr. 16, 2007, is ineffective to overcome the Asano reference. The rejections set forth in paragraphs 7-10 above stand.

12. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re*

Art Unit: 1756

Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

13. The following rejection is a provisional obviousness-type double patenting rejection.

14. Claims 1, 5, 6, 13-15, 18, and 19 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 27 of copending Application No. 10/952,128 (Application'128) in view of US 2001/0031417 A1 (Nagase).

Reference claim 27, which depends from reference claim 1, covers an image forming method comprising the step of developing an electrostatic latent image formed on the organic photoreceptor described in reference claim 1. The organic photoreceptor of reference claim 1 comprises a conductive support and a light sensitive layer, where the toner image

Art Unit: 1756

forming surface comprises inorganic particles and has a surface roughness Ra between 0.2 and 0.1 μm . The surface roughness Ra overlaps the surface roughness Ra of not less than 0.02 μm to less than 0.1 μm recited in instant claim 1. Reference claim 3, which depends from reference claim 2, which in turn depends from reference claim 1, requires that the inorganic particles be hydrophobic silica and that they have a number-based average primary particle diameter between 1 nm to less than 100 nm. The hydrophobic silica particles meet the hydrophobic silica particles limitations recited in instant claims 1 and 19.

The reference claims in Application'128 do not recite the steps of transferring the developed toner image to a recording medium and fixing the toner image as recited in instant claim 1. Nor do the reference claims recite the particular toner recited in the instant claims.

However, the transferring and fixing steps are well known to persons having ordinary skill in the art of electrophotography, as shown by Nagase.

Nagase teaches an image forming method that meets the steps recited in the instant claims but for using the particular photoreceptor recited in the instant claims. The Nagase method comprises the steps of: (1) developing a latent image on a photoreceptor with a developer comprising a toner;

Art Unit: 1756

(2) transferring the toner image to a recording medium;

(3) fixing the toner image to the recording medium; and

(4) removing the toner remaining on the photoreceptor with a cleaning device. Nagase further teaches a full color image forming method comprising the steps of: (1) forming four electrostatic latent images on four photoreceptors, which correspond to a yellow image, a magenta image, a cyan image, and a black image, respectively; (2) developing the four latent images with the corresponding colored toners; (3) transferring the four colored toner images from the four photoreceptors to a receiving member; (4) fixing the transferred toner images to the receiving member; and (5) cleaning the toner remaining on each of the four photoreceptors with a cleaning device. Figs. 2 and 3; and paragraphs 0078 and 0084-0093. The cleaning device comprises a cleaning blade. See Fig. 2.

Nagase further teaches toners that meet the toner limitations recited in the instant claims. Nagase teaches a black toner comprising a colorant, a binder resin, and the ester wax no. 19, pentaerythrytol tetrabehenate. The toner has an average circularity of 0.970 with a standard deviation of circularity of 0.034. Ester compound No. 19 at page 9; Latex 5 in paragraph 0281; black toner 5Bk in Table 1 at page 18. The ester wax no. 19 meets the wax limitations recited in instant

Art Unit: 1756

claims 1 and 15. The Nagase average circularity and standard deviation of circularity fall within the ranges of average circular degree and standard deviation of circular degree recited in instant claims 1 and 13 and in claim 14, respectively. The Nagase average circularity and standard deviation of circularity have the same definitions as the average circular degree and standard deviation of the circular degree recited in the instant claims. Nagase, paragraphs 0249-0251 and paragraph 4 supra. Nagase further discloses a yellow toner, a magenta toner, and a cyan toner that meet the toner limitations recited in instant claims 1 and 13-15. Yellow toner 5Y in Table 2 at page 19, magenta toner 5M in Table 3 at page 20, and cyan toner 5C in Table 4 at page 20.

According to Nagase, its toners are capable of forming color images, which exhibit excellent fixability and offsetting resistance, as well as excellent color reproduction over an extended period of time. Paragraphs 0027 and 0030. Nagase further teaches that its image forming method provides excellent and consistent color reproduction properties over an extended period of time. Paragraph 0029.

It would have been obvious for a person having ordinary skill in the art, in view of the subject matter claimed in

Art Unit: 1756

Application'128, to make and use a photoreceptor as recited in instant claims 1 and 19, and to use the resultant photoreceptor in the image forming method claimed in Application'128. It would have also been obvious for that person, in view of the teachings of Nagase, to incorporate the additional transferring, fixing, and cleaning steps taught by Nagase and to use the Nagase toners in the image forming method rendered obvious over the subject matter claimed in Application'128. That person would have had a reasonable expectation of successfully practicing image forming methods that provide color toner images and full color toner images having excellent color reproduction over an extended period time as taught by Nagase.

15. Claims 3, 16, and 17 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 27 of Application'128 in view of Nagase, and further in view of US 6,338,929 B1 (Hagi).

The subject matter claimed in Application'128, in view of the teachings of Nagase, renders obvious an image forming method as described in paragraph 14 above, which is incorporated by reference.

Nagase does not disclose that toners comprise a metal salt of a fatty acid as recited in the instant claims. However,

Art Unit: 1756

Nagase discloses that the toner may comprise "so-called external additives" for the purpose of "improving fluidity as well as chargeability, and of enhancing cleaning properties" of the toner. Nagase does not limit the type of external additives used. Paragraph 0191.

Hagi teaches toners comprising toner particles and a combination of four particular external additives. The external additives comprise: (1) hydrophobic silica particles having a number-average particle size of 30 nm; (2) titanium oxide particles having a number-average particle size of 50 nm; (3) titanium oxide particles having a number-average particle size of 200 nm; and (4) calcium stearate having a volume average particle size of 5 μm , in an amount of 0.1 wt% of the toner. See col. 9, lines 53-68; col. 10, lines 1-14; and Table 1 at col. 11, example 2. The calcium stearate disclosed by Hagi meets the limitations of the fatty acid salt recited in instant claims 3 and 16. The calcium stearate amount of 0.1 wt% of the toner is within the amount range of 0.01 to 10% by weight of the toner recited in instant claim 17. Accordingly to Hagi, when a toner comprises such a combination of external additives, the adhesion to and the wear of the surface of the photosensitive material is suppressed, and the toner "exhibits the excellent rising property of the electrification, environmental stability

Art Unit: 1756

and durability." Col. 2, lines 12-22. Hagi further teaches that by externally adding the fatty acid metal salt, i.e., calcium stearate, to the toner, a "lubricative film is uniformly formed on the surface of the photosensitive member to prevent the adhesion on said surface, and the occurrence of BS [black spots] can be prevented (a lubricating function)." Col. 5, lines 53-57, and Table 3 at col. 13, example 2.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of Hagi, to use the combination of the four particular external additives in example 2 of Hagi, which includes calcium stearate in an amount of 0.1 wt% of the toner, as the external additives in the toner in the image forming method rendered obvious over subject matter claimed in Application'127 combined teachings of Nagase. That person would have had a reasonable expectation of successfully practicing an image forming method that suppresses the adhesion to and the wear of the surface of the photoreceptor; that provides images with stable image density without the occurrence of fog under various environments; and that provides images without the occurrence of fog after many repeated runs, as disclosed by Hagi.

Art Unit: 1756

16. Claims 6-11 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-3 and 27 of Application'128 in view of Nagase, and further in view of Japanese Patent 09-274417 (JP'417). See the USPTO English-language translation of JP'417 for cites.

The subject matter claimed in Application'128, in view of the teachings of Nagase, renders obvious an image forming method as described in paragraph 14 above, which is incorporated by reference.

Nagase does not disclose the use of a cleaning blade or a cleaning brush as recited in instant claims 6-11. However, as discussed in paragraph 14 above, Nagase discloses that the cleaning device can comprise a cleaning blade. See Fig. 2. Nagase does not limit the type of cleaning device used.

JP'417 discloses a cleaning device for removing toner from an organic photoreceptor. The cleaning device comprises an elastic rubber cleaning blade 5 and a brush 4. Translation, Fig. 1 and paragraphs 0013 and 0023. The cleaning blade 5 contacts the photoreceptor in a direction counter to the rotating direction of the photoreceptor, as recited in instant claim 7. Translation, paragraphs 0014 and 0026. The pressure of the cleaning blade 5 on the photoreceptor is from 5 g/cm

Art Unit: 1756

to 30 g/cm. Translation, paragraphs 0013 and 0023. The brush **5** comprises fibers having a thickness of 6 to 30 deniers. The density of brush fibers is from 4.5×10^2 f/cm² to 15.5×10^2 f/cm². Translation, paragraphs 0017-0019. The cleaning blade **5** meets the cleaning blade limitations recited in instant claims 6-8 and 11. The brush **4** meets the brush limitations recited in instant claim 8-10. According to JP'417, when its cleaning device is used in an image forming method, the cleaning device effectively removes the toner remaining on the photoreceptor without damaging the surface of the photoreceptor and decreasing the wear of the photoreceptor. Translation, paragraphs 0017 and 0025. The image forming method provides good quality images, e.g., up to 200,000 copies, for a long period of time. Paragraphs 0011, 0076, and 0078. JP'417 further discloses that when its cleaning device is not used in the image forming method, the image quality deteriorates after many repeated runs. Paragraph 0077, and Table 1, comparison examples 1-7.

It would have been obvious for a person having ordinary skill in the art, in view of the teachings of JP'417, to use the JP'417 cleaning device as the cleaning device in the image forming method rendered obvious over the subject matter claimed in Application'128 combined with the teachings of Nagase. That

Art Unit: 1756

person would have had a reasonable expectation of successfully obtaining an image forming method that effectively removes toner remaining on the surface of the photoreceptor and that provides good quality images, e.g., up to 200,000 copies, for a long period of time, as taught by JP'417.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Janis L. Dote whose telephone number is (571) 272-1382. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry regarding papers not received regarding this communication or earlier communications should be directed to Supervisory Application Examiner Ms. Claudia Sullivan, whose telephone number is (571) 272-1052.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JLD
Jun. 9, 2007

Janis L. Dote
JANIS L. DOTE
PRIMARY EXAMINER
GROUP 1500
1700